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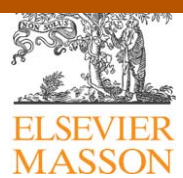

IMAGE

Partially unroofed coronary sinus found incidentally in adult patient

Défaut de cloisonnement partiel du sinus coronaire découvert fortuitement chez un adulte

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A 65-year-old woman visited our institution due to recurrent mild atypical chest pain and dizziness. The patient denied having any systemic disease in the past. Twelve-lead surface electrocardiogram (ECG) showed normal sinus rhythm without evidence of chamber enlargement. Chest radiogram revealed clear lungs with normal heart size (not shown). Cardiac ECG-gated 64-slice multidetector-row computed tomography (MDCT) was arranged for further evaluation. Cardiac computed tomography (CT) was performed using an ECG-gated 64-slice MDCT scanner (Brilliance 64, Philips Medical Systems, Best, The Netherlands). The coronary sinus (CS) was partially unroofed and communicated with the left atrium (Figs. 1 and 2). The CS also drained normally into the right atrium, creating a mild left-to-right interatrial shunt through the CS. The interatrial septum was intact (Videos 1 and 2). No other congenital anomalies, including persistent left superior vena cava (LSVC), were identified by CT. Medical treatment alone controlled her symptoms and she was discharged. Unroofed CS is a rare congenital cardiac anomaly, in which there is partial (focal or fenestrated) or complete absence of the CS roof, which results in communication between the CS and the left atrium. Unroofed CS is the rarest type of atrial septal defect and is associated strongly with persistent LSVC, with or without a connection between both superior venae cavae. LSVC is combined in 75% of patients with unroofed CS, which occurs frequently in congenital heart disease with situs ambiguous, CS venosus-type atrial septal defect and atrioventricular septal defect. Fortunately, our case had no other associated anomalies and no significant symptoms. Clinical manifestations vary according to size of defect and degree of left-to-right shunt. The spectrum of symptoms may

Abbreviations: CS, coronary sinus; CT, computed tomography; ECG, electrocardiogram; LSVC, left superior vena cava; MDCT, multidetector-row computed tomography.

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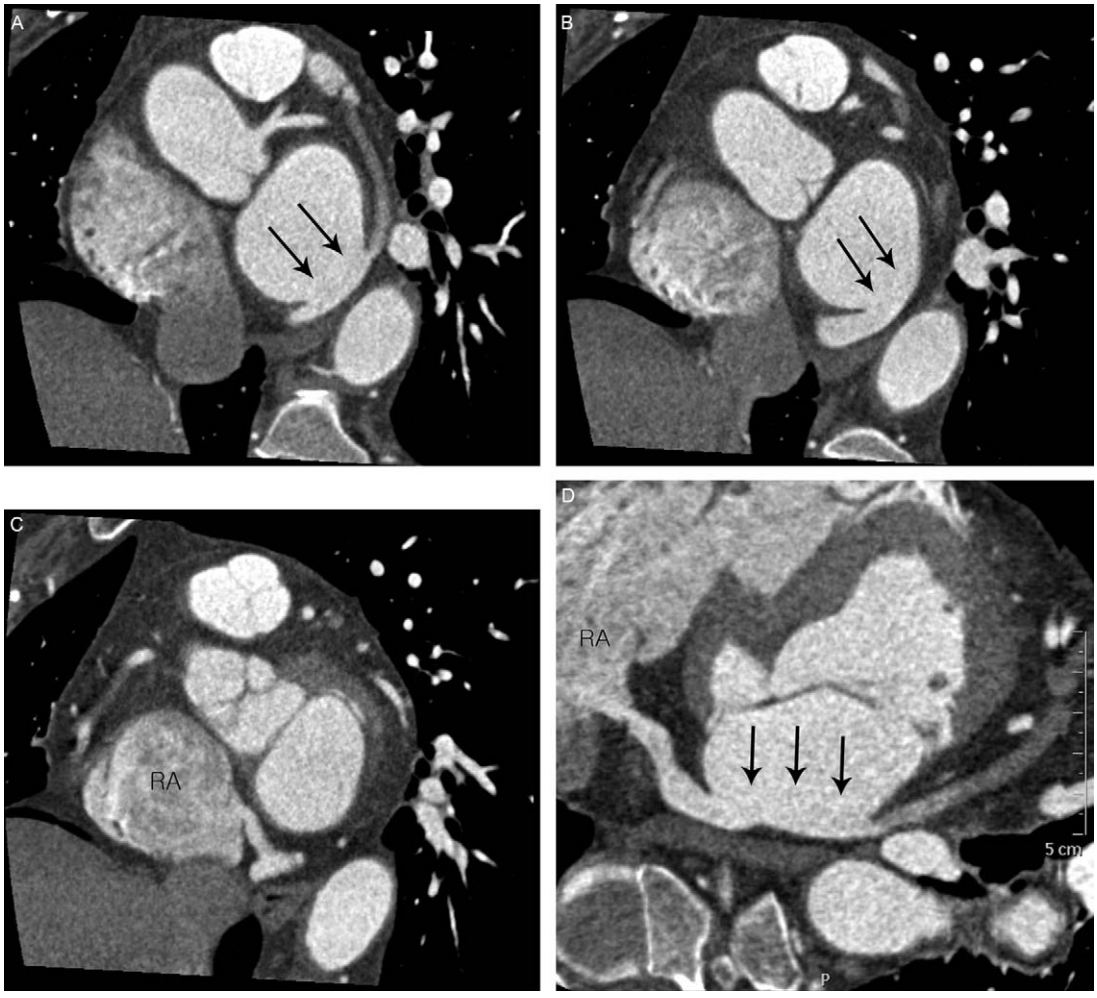

Figure 1. Sixty-four-slice MDCT images from mid-diastolic phase of the cardiac cycle. Serial short-axis images (A—C) and curved multiplanar reformatted image (D) show partially unroofed coronary sinus, site of unroofing (arrows) and dense contrast (left-to-right shunt) entering the right atrium (RA).

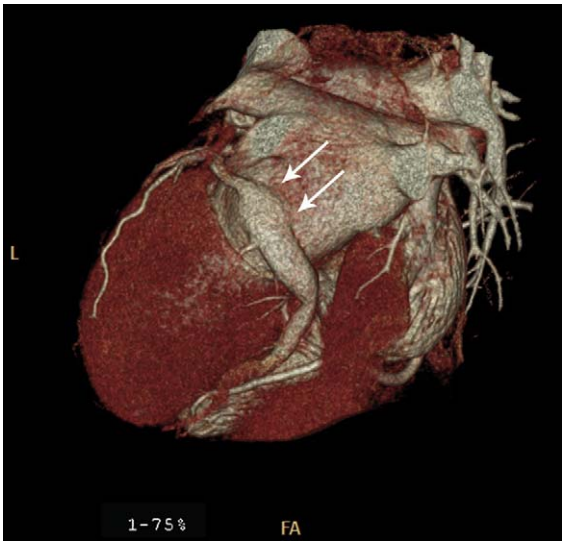

Figure 2. Three-dimensional volume-rendering image, showing partial direct communication (arrows) between the coronary sinus and the left atrium, and mild dilatation of the coronary sinus.

range from asymptomatic to nonspecific complaints to severe dyspnoea with symptoms of overt right-sided heart failure from chronic right ventricular volume overload. However, unroofed CS is very difficult to diagnose from clinical signs and symptoms alone. The pure form of this anomaly should be suspected in patients with left-to-right interatrial shunt and unexplained arterial oxygen desaturation or cerebral complication, such as brain abscess or infarction. In summary, we report on a case of partially unroofed CS found incidentally in a 65-year-old female patient who was studied by ECG-gated 64-slice MDCT.

Disclosure of interest

The author declare that he has no conflicts of interest concerning this article.

Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at doi:10.1016/j.acvd.2010.04.011.